



Money Isn't All You're Saving

ENERGY STAR[®]

**Making It Easy
To Make a Difference**

**ENERGY STAR[®] Labeled
Telephony Products**



Making it easy to make a difference

Overview

- What is ENERGY STAR®?
- ENERGY STAR® Labeled Telephony Products
- Proposed Telephony Specification
- Designing for Energy Performance
- Conclusion



Money Isn't All You're Saving

Making it easy to make a difference

What is ENERGY STAR®?



Making it easy to make a difference

The ENERGY STAR® Philosophy

- Foster public-private partnerships
- Reduce air pollution
- Recognize the most energy-efficient product models in the market
- Maintain customer satisfaction
- Encourage innovation and competition



Money Isn't All You're Saving

Making it easy to make a difference



Money Isn't All You're Saving



Making it easy to make a difference

The ENERGY STAR[®] Label

- Voluntary labeling program
- Seeks market transformation
- The ENERGY STAR[®] label is a trusted symbol that identifies products with superior energy performance

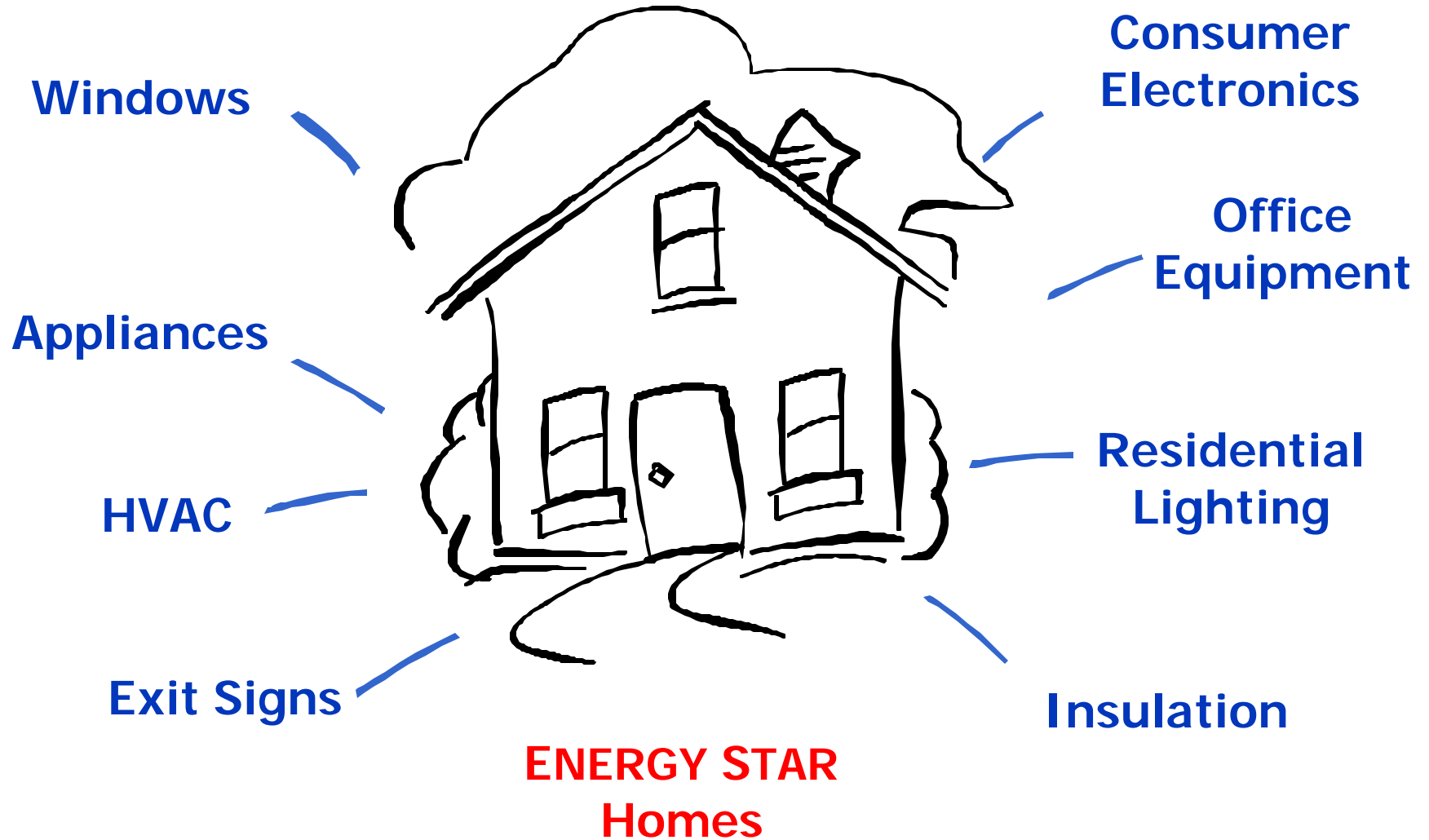


Making it easy to make a difference

ENERGY STAR[®] Products

- More than 1,200 manufacturers
- About 7,000 product models
- Over 30 product areas, including ...

Commercial Buildings

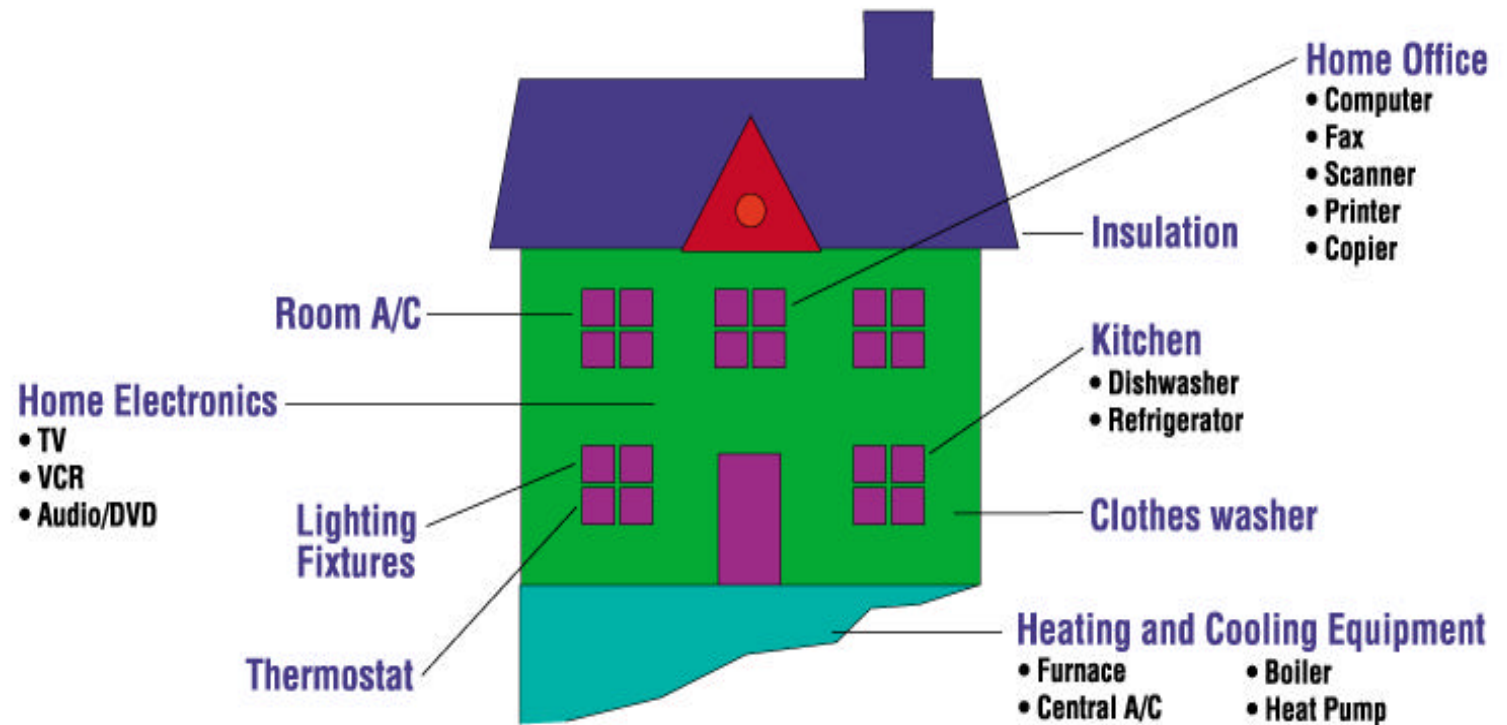




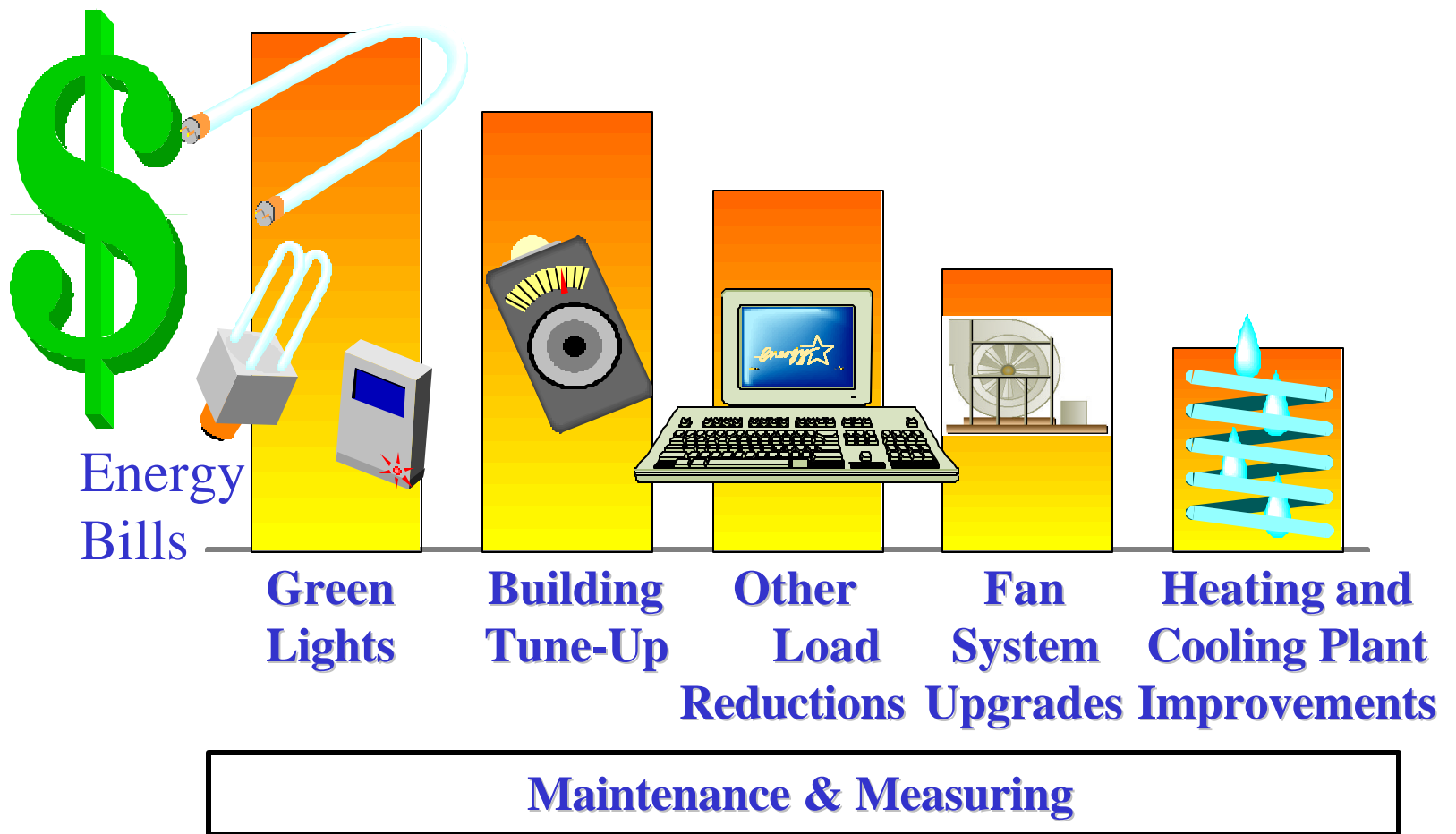
Money Isn't All You're Saving

Making it easy to make a difference

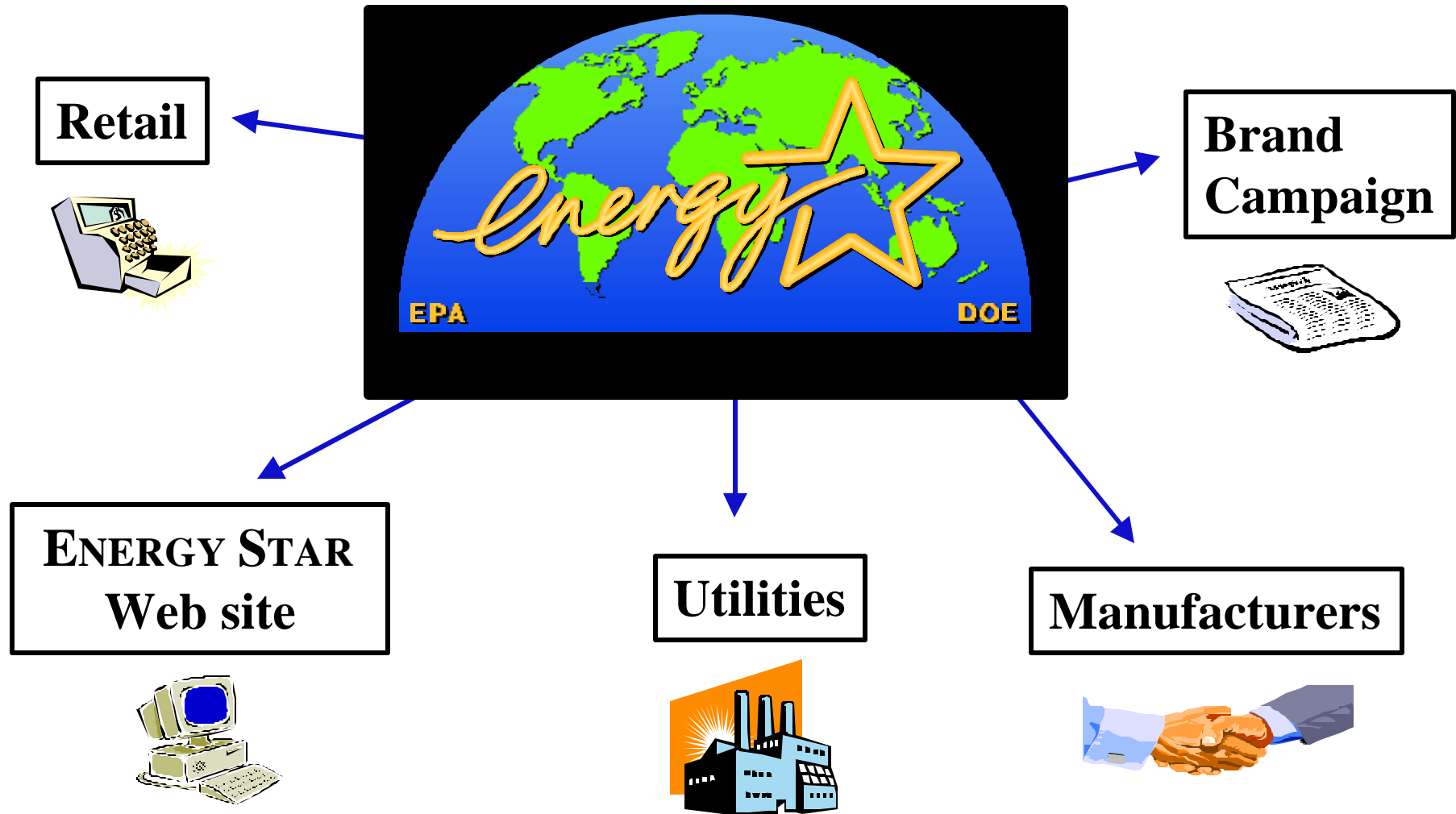
Whole Home Approach



Whole Buildings Approach



ENERGY STAR® Network: A Turn-key Approach

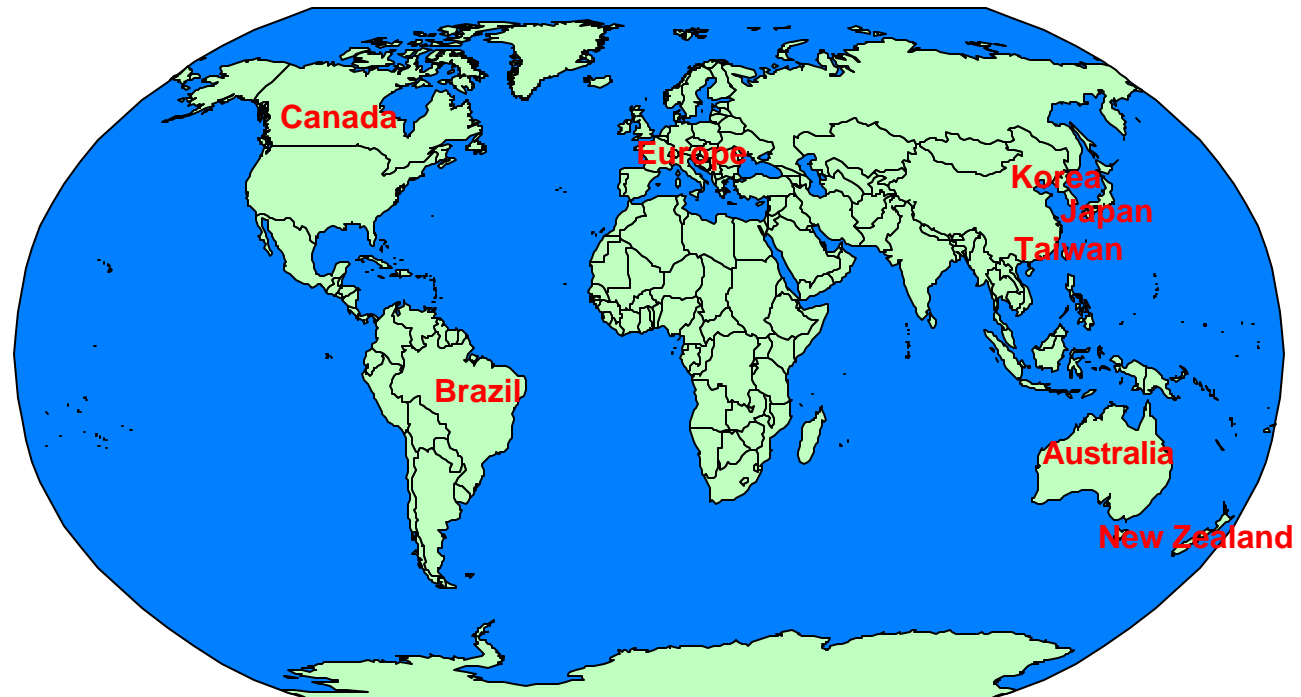




Money Isn't All You're Saving

Making it easy to make a difference

International Expansion and Coordination





Money Isn't All You're Saving

Making it easy to make a difference

ENERGY STAR[®] Labeled Telephony Products



Money Isn't All You're Saving

Making it easy to make a difference

Why Label Telephony Products?

- The growing telephony product market
- Market differentiation
- Potential for more energy-efficient design
- If all telephony products sold in the US between 1/1/01 and 12/31/10 met the specification, over 86.2 trillion watt-hours and \$4.9 billion could be saved.
 - Equivalent to removing the emissions from over 1 million cars or planting 1.4 million acres of trees

EPA and CEEI: Greening the Industry's Supply Chain

- EPA is working with CEEI to
 - Develop a baseline of energy use within the telecom industry
 - Inform CEEI member companies about technologies for improving efficiency and reducing costs
 - Examining potential reductions in energy use in other sectors attributable to telecom technology

Making it easy to make a difference

The Industry's (Supply) Chain

- Distributors
- Original Equipment Manufacturers
- Component Suppliers
- Trade Associations and Groups



Money Isn't All You're Saving

Making it easy to make a difference

What Is Included?

- Consumer telephony products with pollution prevention potential
 - Cordless Phones
 - Answering Machines
 - Combination units

Why Now?

- Telephony industry is interested in environmental issues
- Europe and Asia are developing standards
- California is considering standards
 - High electrical demand from standby power applications
 - Rising energy costs
 - Blackouts and brownouts

**Number of Units, Aggregate Energy Use, Share of US
Residential Electricity Use (1999), and Projected 2000 Sales**

Product	Number of Units (millions)	National Telephony Energy Use (TWh/yr)	Share of US Residential Electricity Use	Projected Unit Sales 2000 (millions)
Answering Machines	77	2.1	0.19%	20
Cordless Phones	87	2.4	0.21%	30
Cordless/ Answering Machines	35	1.0	0.09%	12
Total US	199	5.5	0.49%	62

Making it easy to make a difference

What Can the Label Do for Telephone Distributors?

- Offer Competitive Advantages
- Demonstrate Corporate Stewardship
- Meet Consumer Preferences

Making it easy to make a difference

What Can the Label Do for OEMs and Component Suppliers?

- Offer a Clear Specification
- Offer Competitive Advantages to Clients
- Demonstrate Corporate Stewardship
- Meet Corporate Client Preferences
- Associate Company with the Label

Offer Competitive Advantages

Use the label to . . .

- Showcase superior product design
- Differentiate your products
- Gain positive publicity and increased customer loyalty

Making it easy to make a difference

Demonstrate Corporate Stewardship

- The ENERGY STAR[®] label = real pollution, energy, and dollar savings
- Be a corporate leader: demonstrate innovation
- Enhance relations with consumers and your image in the marketplace



Making it easy to make a difference

Meet Consumer Preferences for...

- Products that save energy and money and protect the environment
- Products with lower lifetime operating costs
- Devices that emanate less heat, resulting in increased reliability and durability
- Smaller, lighter, more efficient wall packs that use less outlet space



Making it easy to make a difference

Marketing Energy-efficient Products

- ENERGY STAR[®] qualified telephony products are
 - lighter
 - smaller
 - run cooler
 - have lower lifetime operating costs



Money Isn't All You're Saving

Making it easy to make a difference

Proposed Telephony Specification

Proposed Specification

- Standby power demand not to exceed **0.5 watts** during standby operation.
- If all 62 million telephony products projected to be sold in the US in 2001 met this specification, over 1.5 TWh could be saved annually
 - This would save consumers \$112 million each year.
 - Each 1 million answering machines and cordless phones would save about \$11 million over the lifetime of the average product.



Making it easy to make a difference

Testing Guidelines

- Self-certification
- Average true power in standby mode
- Tested as shipped to consumer



Money Isn't All You're Saving

Making it easy to make a difference

Design for Energy Performance

Making it easy to make a difference

Opportunities for Energy Savings

- Power supplies
- Battery chargers
- Circuit design

Power Supplies

- Switch mode power supply (SMPS) can help
 - Low losses in power conversion
 - Can help stops the battery-charging process once batteries are fully charged
 - Reduces weight and size of product
 - No-load losses less than those of standard linear power supplies
 - Can be used at 110V or 220V
 - Supply cleaner voltage, reducing the need for voltage regulators in the phone



Making it easy to make a difference

Power Supplies

- Switch mode power supplies alone may make some existing answering machines ENERGY STAR[®] compliant
- Efficient power supplies are a critical component of future compliant products

Making it easy to make a difference

Battery Chargers

- Use technology that “senses” when the battery is fully charged so that it can switch to a “trickle charge” mode
- Adopt more efficient battery/charger combos

Circuit Design

- Circuitry can be part of phone handset base station
- Disengage circuits once the call is complete
- Use energy-efficient displays



Money Isn't All You're Saving

Making it easy to make a difference

Costs?

- Over the next manufacturing cycle, the incremental cost of designing energy efficiency into products tends toward **zero**.

ANNUAL SAVINGS OPPORTUNITIES

Product	Losses in Current Models (kWh/yr)	Losses in Proposed Models (kWh/yr)	Savings (Percent)	Projected Unit Sales 2000 (millions)	TWh Saved	MMTCE	\$ Million
Answering Machine	27.2	4.4	84	20	0.46	0.09	33.3
Cordless Phone	27.9	4.6	83	30	0.71	0.14	51.5
Cordless/ Answering Machines	35.1	4.9	86	12	0.37	0.07	26.9
Total				62	1.53	0.31	111.7



Money Isn't All You're Saving

Making it easy to make a difference

Conclusion:

**Working To
Transform the Market**



Making it easy to make a difference

How To Join ENERGY STAR®

- Sign the Partnership Agreement
- Label your company's compliant products
- Train and educate staff on selling points of ENERGY STAR® products
- No participation or program fees
- Self-verification



Making it easy to make a difference

As a Partner You Receive:

- An opportunity to participate with EPA in conference and events
- A full range of program support materials and services
- Free point-of-purchase and sales training materials
- A listing on EPA's web site
- Sample marketing and media materials
- Access to utility, retail, and co-branding promotions



Money Isn't All You're Saving

ENERGY STAR®

**Making it easy to make a
difference**



Making it easy to make a difference

For More Information

- Contact Craig Hershberg
ENERGY STAR® Consumer
Electronics Program Manager
 - E-mail: hershberg.craig@epa.gov
 - Phone: (202) 564-1251
- Julio Rovi, Senior Account Manager,
The Cadmus Group, Inc.
 - E-mail: jrovi@cadmusgroup.com
 - Phone: (703) 247-6134
- Visit www.energystar.gov